1 When a drawing pin is dropped it can land point down or point up.

Lucy, Mel and Tom each dropped the drawing pin a number of times.

The table shows the number of times the drawing pin landed point down and the number of times the drawing pin landed point up for each person.

	Lucy	**Mel**	**Tom**
point down	31	53	16
point up	14	27	9

Rachael is going to drop the drawing pin once.

(a) Whose results will give the best estimate for the probability that the drawing pin will land point up?
Give a reason for your answer.

....

....
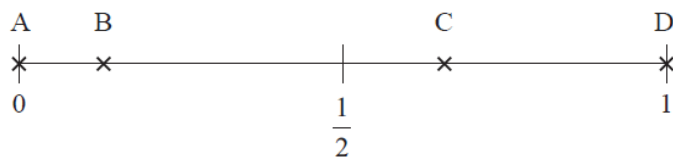
(1)

Stuart is going to drop the drawing pin twice.

(b) Use all the results in the table to work out an estimate for the probability that the drawing pin will land point up the first time and point down the second time.

....

(2)

(Total for Question   is 3 marks)

2 Here is a probability scale.
It shows the probability of each of the events A, B, C and D.

(a) Write down the letter of the event that is certain.

....

(1)

(b) Write down the letter of the event that is unlikely.

....

(1)

There are 12 counters in a bag.

3 of the counters are red.
1 of the counters is blue.
2 of the counters are yellow.
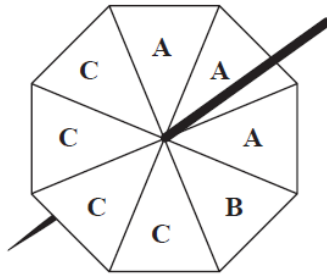The rest of the counters are green.

Caitlin takes at random a counter from the bag.

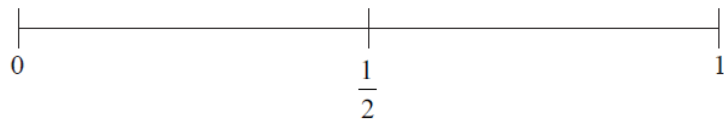(c) Show that the probability that this counter is yellow or green is $\dfrac{2}{3}$

(3)

(Total for Question   is 5 marks)

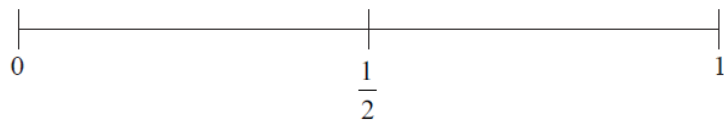**3**   Gita spins a fair 8-sided spinner.

(a) On the probability scale, mark with a cross (✕) the probability that the spinner will land on **C**.

(1)

(b) On the probability scale, mark with a cross (✕) the probability that the spinner will land on **D**.

(1)

(Total for Question   is 2 marks)